Common Commodities Management System (CCMS) Corporate Engineering Utilization (EU) Council Initiative

April 20, 2010

Director, Strategic Operations
Corp Project Lead – CCMS Initiative

Defense Standardization Program Office
Parts Standardization & Management Committee
2010 Spring Conference

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Five Operating Sectors

NORTHROP GRUMMAN

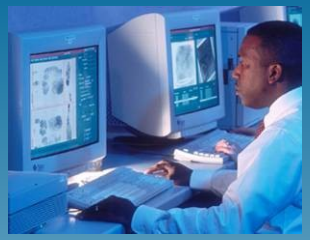
Aerospace Systems

- Large Scale Systems Integration
- C⁴ISR
- Unmanned Systems
- Airborne Ground Surveillance / C2
- Naval BMC2
- Global / Theater Strike Systems
- Electronic Combat Operations
- ISR Satellite Systems
- Missile Defense Satellite Systems
- MILSATCOM Systems
- Environmental & Space Science Satellite Systems
- Directed Energy Systems
- Strategic Space Systems

Electronic Systems

- Radar Systems
- C⁴ISR
- Electronic Warfare
- Naval & Marine Systems
- Navigation & Guidance
- Military Space
- Government Systems

Information Systems



- Command & Control Systems
- Network Communications
- Intelligence, Surveillance & Reconnaissance Systems
- Enterprise Systems and Security
- IT/Network Outsourcing
- Intelligence
- Federal, State/Local & Commercial
- Homeland Security & Health

Shipbuilding

- Naval Systems Integrator
- Surface Combatants
- Expeditionary Warfare Ships
- Auxiliary Ships
- Marine Composite Technology
- Coast Guard Cutters
- Commercial Ships
- Nuclear Aircraft Carriers
- Nuclear Submarines
- Fleet Maintenance
- Aircraft Carrier Overhaul & Refueling

Technical Services

- Systems Support
- Base and Infrastructure Support
- Range Operations
- Maintenance Support
- Training and Simulations
- Technical and Operational Support
- Live, Virtual and Constructive Domains
- Life Cycle Optimization
- Performance Based Logistics
- Modifications, Repair and Overhaul (MRO)
- Supply Chain Management
- Lead Support Integrator (LSI)

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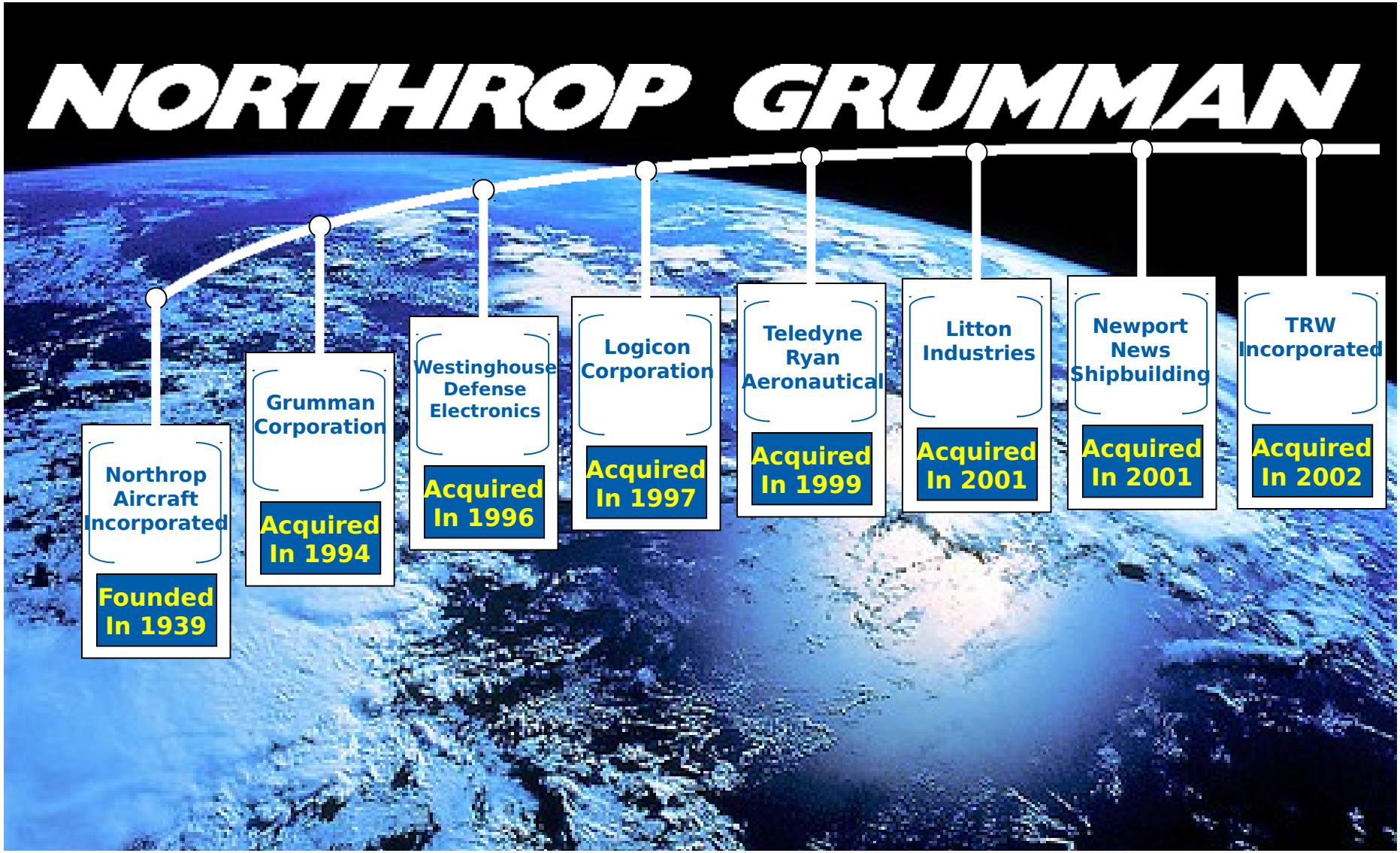
Northrop Grumman Heritage



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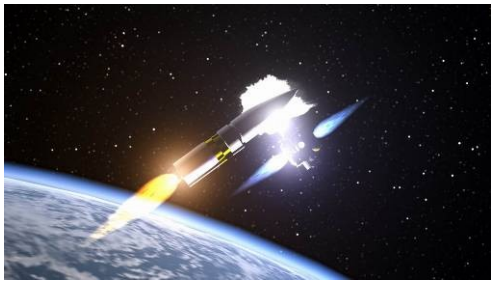
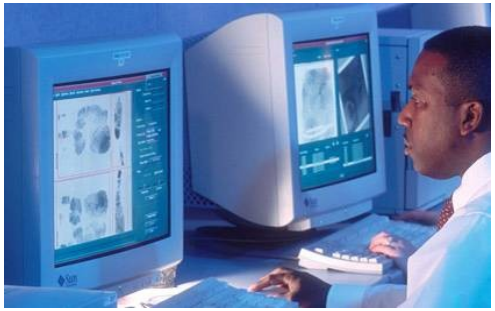
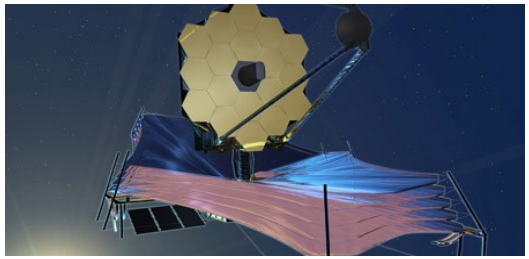
Northrop Grumman – Diversity of Products







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NORTHROP GRUMMAN

CCMS Objectives

Parts Management

Objective

Increase Parts Standardization (common parts) and improve operational efficiency by:

- An integrated Engineering parts selection and control process to reduce parts counts, purchase orders, and improve supplier relations.
- An increased awareness during engineering development of the need to utilize standard parts along with an efficient system to facilitate personnel identifying those common / standard parts.
- An integrated **Engineering, Quality, Supply Chain, Product Support and IT Solutions** approach to reduce the internal total cost of ownership (TCO) within Northrop Grumman.

Strategic Vision

- Establish a Corporate Engineering Standards Group.
- Establish Sector Level Engineering Standards Organization.
- Establish Corporate Standard Parts Library (CSPL).
- Mil-Std-3018 (Parts Management) Compliant.

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CCMS Corporate Leadership ...

Vice President
Space & Defense Produc
CCMS Executive Lead

CEO

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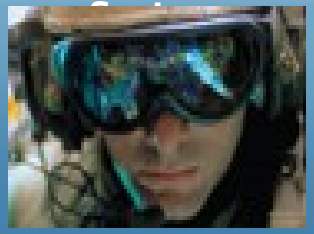
Programs, Quality, &
Engineering
&
gineering Utilization
Executive Lead

Aerospace

Electronic

Information



Shipbuilding

Technical Services

Enterprise - Wide Engineering Team Formed
Supply Chain, Enterprise Shared Services & IT Business Solutions Partne

Vice President
Corporate Contracts, Pricing & Supply Cha...

Vice President
Enterprise Shared Services

Vice President - CIO
Information Technology Solutions

... with Highly Integrated CCMS Cross-Functional Level Team Delivering Results

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CCMS' Comprehensive Multifaceted Approach…

Corporate Standard Parts Libra

(CSPL)

- CSPL Corporate database:
  - Database of standard parts to be used throughout the sectors.
  - Used by the Sector Engineering Standards organizations and Global Supply Chain/Procurement organizations.
  - Provides cross sector visibility of standards to enhance individual sectors' Standard Parts Lists (SPL) and Product Data Management (PDM) data.
  - and deploy on new development programs as well as legacy programs (where applicable)
- Governance through Corporate Engineering Standards Board (CESB)
  - Consists of Engineering Standards representatives from each sector.

Provides a centralized repository of Common (Standard

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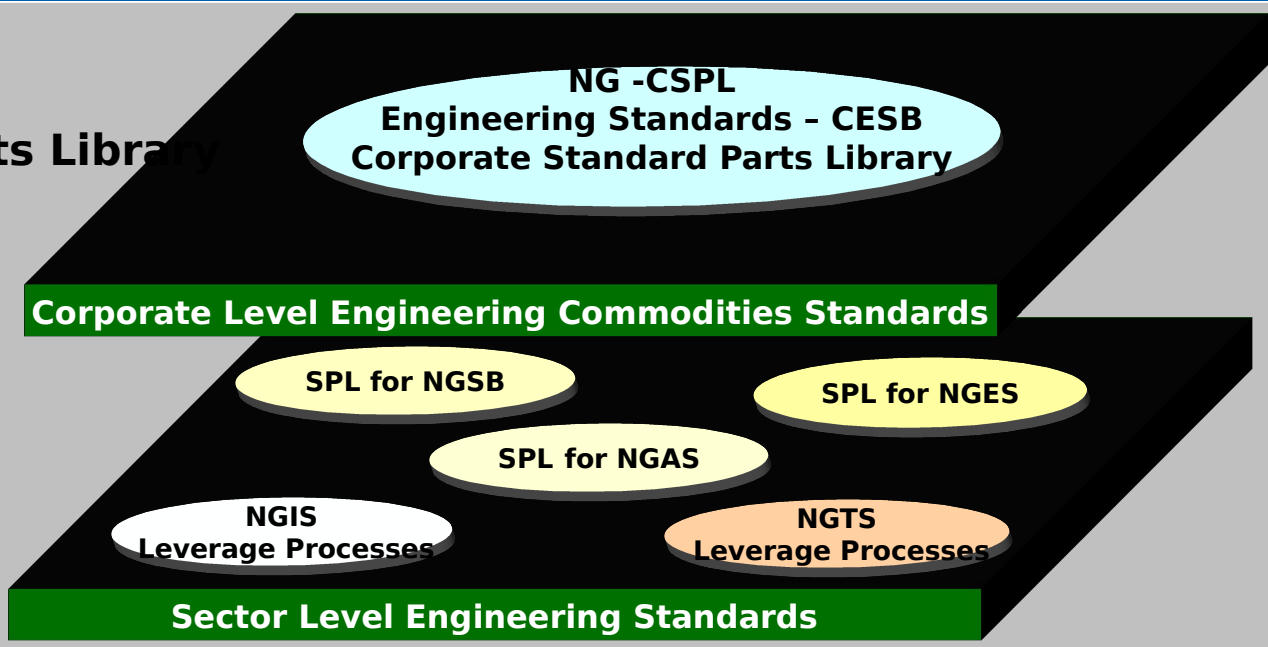
CCMS' Comprehensive Multifaceted Approach…

Corporate Standard Parts Library (CSPL)

Organizational Construct



- Sector level initiatives:
  - **NGAS established plan to institute an Engineering Standards Organization to support all sector programs.**
  - **NGES established plan to institute Common Tools, Common Parts, & Processes for an Engineering Standards Organization to support all sector programs.**
  - **NGSB established a 'Common Part Process Joint team'**
  - **NGIS & NGTS will leverage processes, procedures, and capabilities developed during AS and ES rollouts.**

… Enhances Methodology for Implementing Common (Standar

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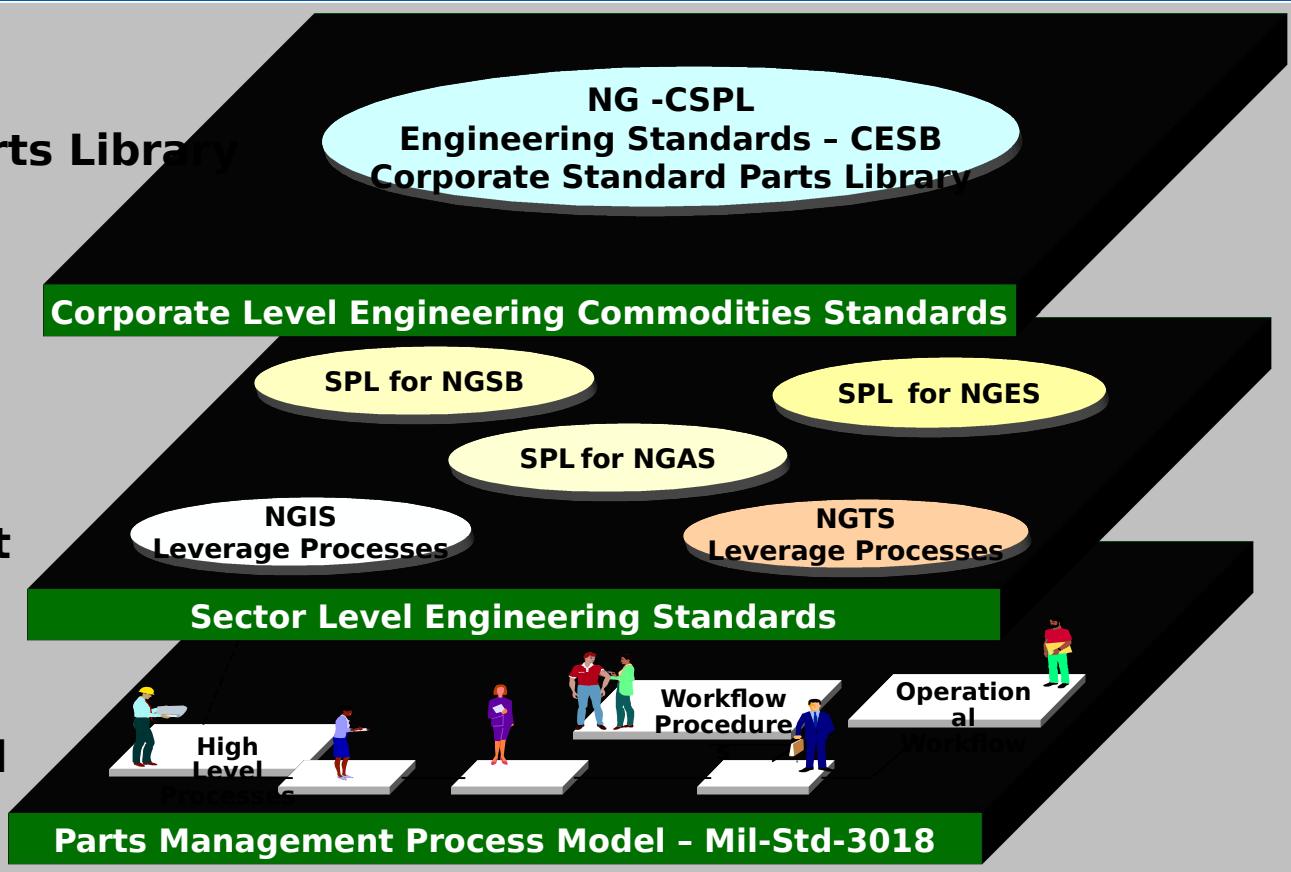
CCMS' Comprehensive Multifaceted Approach…

Corporate Standard Parts Library (CSPL)

Organizational Construct

Process Model



- **CCMS provides a forum across the enterprise to share best practices and processes in support of the parts management process.**

… Builds Key Partnerships & Relationships

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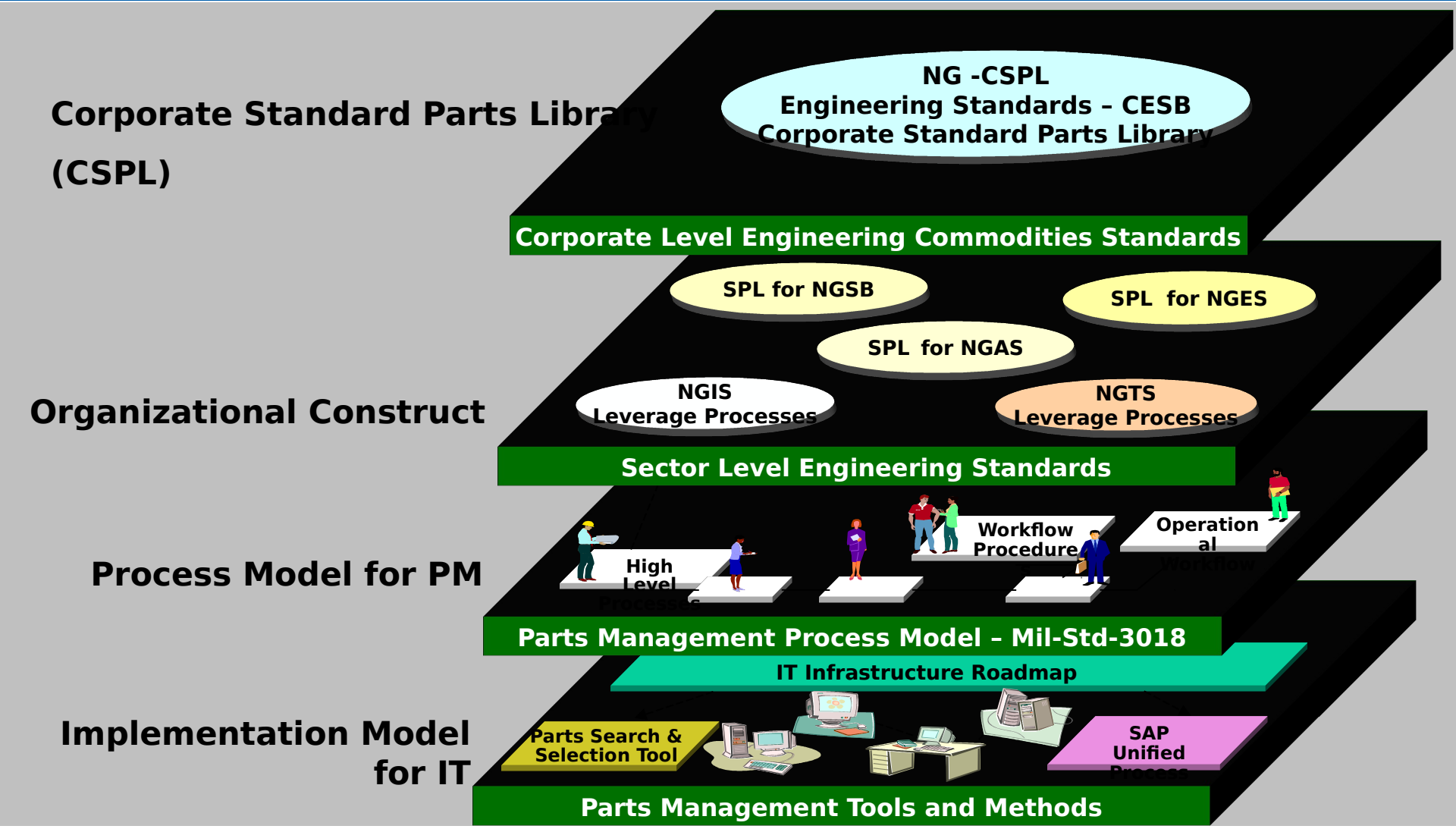
CCMS' Comprehensive Multifaceted Approach…



… Creates an Engineering - Knowledge Sharing Capa

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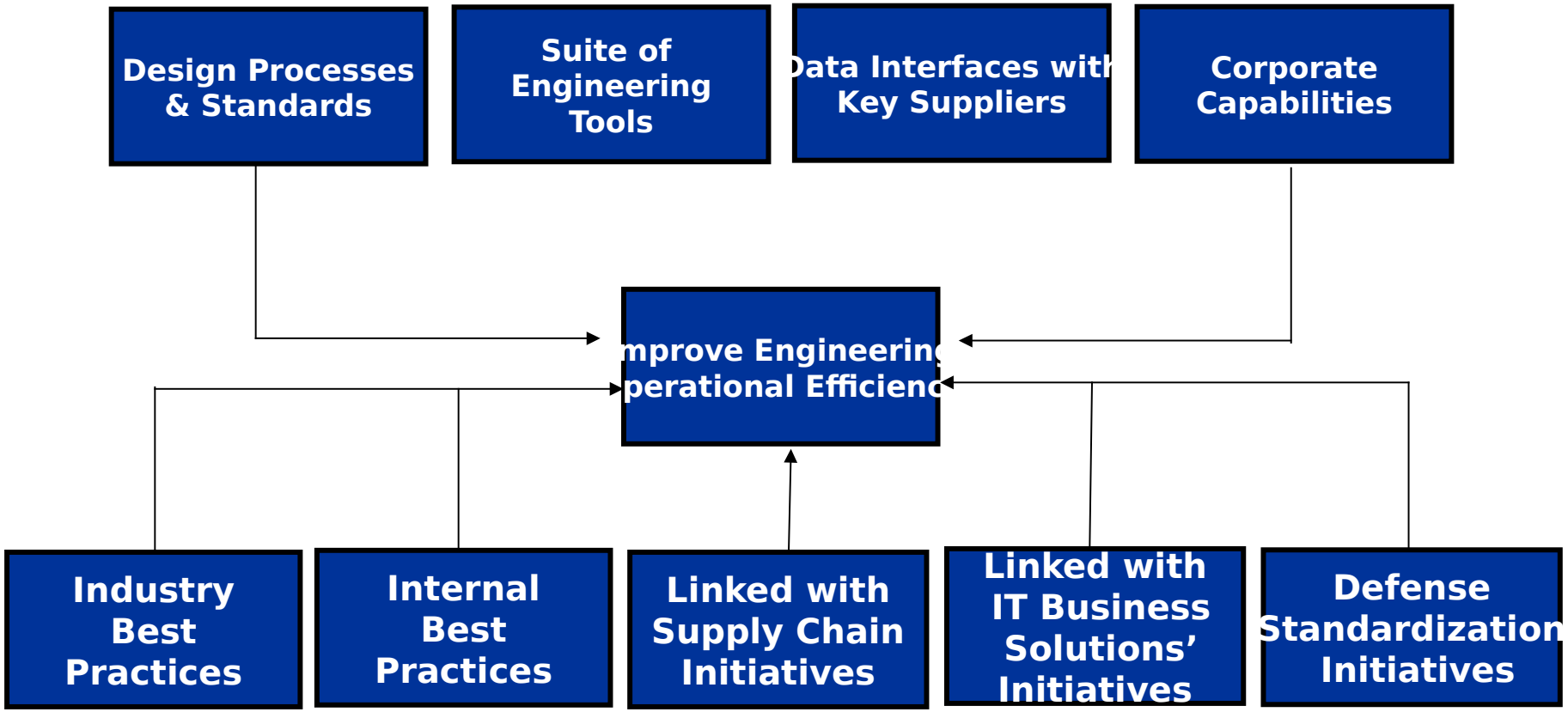
NGC's CCMS initiative Leverages Engineering Utilization…



… to Improve Engineering Operational Efficiency at the Design & Development phase during Parts Selection

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Closing Comments

- Corporate Commitment for CCMS Initiative
- Process Excellence & Team Collaboration continues to be key elements for success:
  - Fosters Standardization by promoting commonality of parts / processes.
  - Enhances common understanding of the benefits of Parts Management.
  - Promotes Knowledge Sharing Capability.
  - CCMS Initiative is a win-win solution for NGC and our Customers.

People are Key - working jointly across the Corporation

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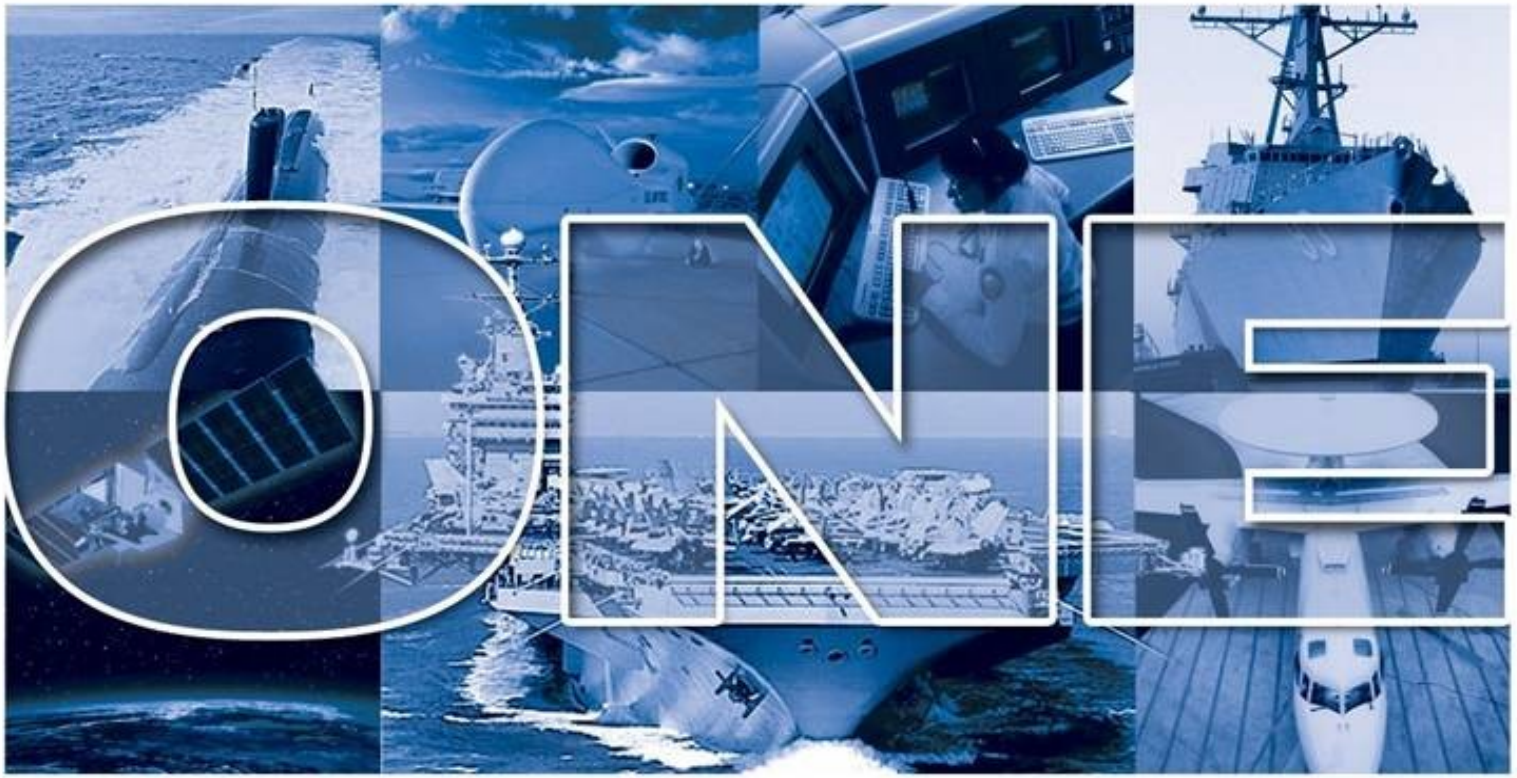

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